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Control circuit for turbine AC motor-generator - monitors power supply to regulate secondary excitation windings for constant operation of synchronous machine

Patent Assignee: HITACHI LTD (HITA); KANSAI ELECTRIC POWER CO (KANT)

Inventor: AKIO S; GOTO M; KATO T; NOHARA H; SAWA H; SUGIMOTO O

Number of Countries: 003 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
DE 3634328	A	19870409	DE 3634328	A	19861008	198715 B
JP 62085699	A	19870420	JP 85222812	A	19851008	198721
JP 62181698	A	19870810				198737
US 4742288	A	19880503	US 86915392	A	19861006	198820

Priority Applications (No Type Date): JP 8623162 A 19860205; JP 85222812 A 19851008

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 4742288	A		17		

Abstract (Basic): DE 3634328 A

The a.c. motor-generator is operated with the synchronous machine and a control induction machine, and is of secondary excitation type. The degree of excitation of the secondary windings is controlled for an output according to an externally applied control signal. If the power output between the supply and the synchronous machine alters, the control signal is adjusted accordingly, the excitation is adjusted and the change in power output is absorbed so that operation of the synchronous machine is constant.

The external control signal is passed to a comparator processor stage, supplying an input signal to a computer which controls the phase angle of the secondary windings. A second computer which monitors the supply, delivers signals to the phase angle computer.

USE/ADVANTAGE - Power generating plant. Accurate control of water pumped to storage zone is maintained.

Abstract (Equivalent): US 4742288 A

The AC motor/generator has the secondary excitation winding controlled in the amount of excitation so as to generate an output in accordance with an external output command. In the case of variation of power flow between the power system and the synchronous machine, the output command is corrected in accordance with the variation.

The amount of the secondary excitation is controlled by the corrected output command. The variation of power flow between the power system and the synchronous machine is absorbed by the AC motor/generator thereby to prevent the synchronous machine from stepping out.